Water, Water Everywhere … Finally a Drop to Drink

Workers construct an ion exchange system as part of one of the water treatment plants.

San Gabriel Valley– Baldwin Park Site

In Southern California where water is a precious commodity, an agreement to clean up contaminated groundwater is hailed by all concerned as a landmark solution to the largest of the San Gabriel Valley Superfund sites. The $200 million pact-signed by seven water companies and eight responsible parties in March 2002 and made effective on May 9, 2002—will result in clean water for approximately 100,000 homes. EPA played a key role in the negotiations and in navigating the very complex and contentious issues to formulate a cooperative solution to the groundwater contamination that has plagued the area for more than 20 years.

San Gabriel Valley, Baldwin Park Site

The San Gabriel Valley Superfund sites include multiple areas of contaminated groundwater in the San Gabriel Basin aquifer, a critical source of drinking water in Southern California. Groundwater contamination at the sites results from the cumulative impact of decades of spills, improper chemical handling and disposal practices. Approximately 30 square miles of the 170 square mile San Gabriel Valley are contaminated. The Baldwin Park Operable Unit addresses several, commingled plumes of groundwater contamination that have resulted in an area of contamination over a mile wide and eight miles long. The most prevalent contaminants in the groundwater are trichloroethene (TCE), perchloroethylene (PCE), carbon tetrachloride, perchlorate, and N-nitrosodimethylamine (NDMA). TCE, PCE, and carbon tetrachloride are solvents used for degreasing and cleaning; perchlorate is a component of solid-fuel rockets; and NDMA is associated with liquid-fuel rockets. The peak contaminant concentration measured in groundwater in the Baldwin Park area is 38,000 ug/l PCE; more than 7,500 times the maximum contaminant level.

EPA declared portions of the San Gabriel Valley Basin as four separate a Superfund sites site in 1983 after discovering contamination from volatile organic compounds. The agency divided the site into several areas, the largest of which is Baldwin Park. For the next 15 years, EPA worked to design a plan to clean up the groundwater. The discovery of perchlorate and NDMA in the groundwater in 1997 and 1998 was one of several causes of delay while the extent of contamination was determined and new treatment technologies tested. The presence of perchlorate and

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JUST THE FACTS:

- The cleanup plan requires responsible parties to pump approximately 22,000 gallons per minute of contaminated groundwater and treating it to remove contaminants. The $200 million plan is one of the nation's largest Superfund agreements.
- As a result of the comprehensive cleanup plan, clean drinking water will be available to 100,000 homes.
- The four Baldwin Park treatment plants will clean over 10 billion gallons of water per year and deliver more than 180 billion gallons of high-quality drinking water over then next 15 years.

"Our staff worked very hard in setting national precedent by gaining agreement between all parties to not only clean up the contaminated groundwater, but then deliver clean drinking water to residents"

"Choosing the traditional route would have meant cleaning up the groundwater without trying to satisfy local water supply needs. This agreement does both"

Wayne Nastri, EPA's regional administrator for the Pacific Southwest Region.

NDMA forced the closure of a number of public water supply wells in the area, leading to renewed local interest in using the treated groundwater produced by the cleanup.

Cleanup Agreement a Victory for the Environment and the Residents

After hundreds of hours of negotiations, active EPA mediation, assistance from professional third—party environmental mediators, multiple public hearings, and extensive media coverage, eight responsible parties and seven water agencies signed an agreement in March 2002. The eight companies agreed to pay approximately $200 million over the next 15 years to clean up the polluted groundwater at the Baldwin Park operable unit. The cleanup plan—which is one of the largest and most expensive in the United States—combines cleanup and regional water supply goals. While it was a long and arduous process to reach this point, the comprehensive agreement fulfills the parties' expectations with respect to cleanup goals and a resolution to the end use of the treated groundwater. The agreement commits the eight responsible companies to fund the design, construction, and operation of the groundwater extraction, treatment, and conveyance facilities needed to satisfy EPA's cleanup goals and meet local water supply needs. The residents of San Gabriel are the true winners since most of the costs of the cleanup will be passed to the responsible parties, not the local water customers. Federal funds earmarked for groundwater cleanup in the San Gabriel Basin are paying some of the costs.

The eight responsible companies that signed the agreement with the water entities are Aerojet General Corporation, Azusa Land Reclamation Co. Inc., Fairchild Holding Corp., Hartwell Corp., Huffy Corporation, Oil & Solvent Process Co., Reichold, Inc., and Wynn Oil Co. EPA's issuance of a Unilateral Administrative Order (UAO) in June 2000 helped enormously in ultimately reaching an agreement and avoiding further delays.

Cleanup Approach

After reviewing hundreds of public comments, EPA selected a cleanup plan for the Baldwin Park area in 1994. The plan was updated in 1999. The selected remedy, now under construction, includes four groundwater pump and treat systems capable of extracting and treating approximately 22,000 gallons per minute, or 32 million gallons per day, of contaminated groundwater. Each of the four subprojects will have a series of treatment processes expected to include air stripping, ion exchange, and advanced oxidation (ultraviolet light and hydrogen peroxide).

The four systems are: La Puente Valley County Water District (LPCWD) project, San Gabriel Valley Water Company B6 and B5 projects, and Valley County Water District's Sub-Area 1 project. The LPCWD has been completed and is now supplying the treated groundwater for potable use. Construction of the B-6 facility began in April 2002, and is due for completion in mid 2003. The Sub-Area 1 facility began construction in late 2002 and is due for completion by Fall 2003. The B-5 facility is in the design phase.

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